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AUTHOR Giannelli, Anthony J.
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ABSTRACT

Using the most current national data available, a study investigated the level on Ontario's contributions to its university system in relation to nine other Canadian provinces. The approach was to trace the student enrollment figures and provincial contributions to operating revenues from 1971-72 until 1973-74 in order to determine the levels of support on a per student basis. The results showed a dramatic decreasing position for Ontario in its funding on a per student basis when compared to the other provinces. In 1971-72 and 1972-73 Ontario's per student contributions were above the national average by $55 and $64, respectively, and ranked third in Canada, while in 1973-74 the contribution was $45 below the national average and the province ranked sixth in the nation. The preliminary data for 1974-75 indicate a continued deteriorating position for Ontario, falling even further behind the national average and having a lower rank order position. In 1973-74 Ontario would have had to contribute approximately $12.4 million in order to match the per student contribution average of the other provinces. The financial estimates for 1975-76 show that the gap between Ontario and the national average has grown larger. (Author/LBH)

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A COMPARISON OF PROVINCIAL CONTRIBUTIONS TO CANADIAN UNIVERSITIES

by

Anthony J. Giannelli, PhD

A Report Submitted to the
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U.S. DEPARTMENT OF HEALTH
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Summary

Using the most current national data available, a study was conducted to investigate the level of Ontario's contributions to its university system in relation to the other nine Canadian provinces. The approach that was utilized in this comparison was to trace the student enrolment figures and provincial contributions to operating revenues from 1971-72 until 1973-74 in order to see what the levels of support on a per student basis had been. All of the basic data were generated and reported by Statistics Canada, but some corrections had to be made to these figures.

It should be noted that the provincial contributions utilized in this study may not be completely accurate because of changes in the reporting format from year to year; however, it is unlikely that the relative standings of provinces would be affected by the inaccuracies.

The results of the study showed a dramatic decreasing position for Ontario in its funding on a per student basis when compared to the other provinces. In 1971-72 and 1972-73 Ontario's per student contributions were above the national average by $55 and $64 respectively and ranked third in Canada, while in 1973-74 Ontario's per student contribution was $45 below the national average and the province ranked sixth in the nation. The preliminary data for 1974-75 indicate a continued deteriorating position for Ontario, falling even further behind the national average and having a lower rank order position.

Relatively speaking, in 1973-74, Ontario would have had to contribute approximately $12.4 million in order to match the per student contribution average of the other provinces. In 1974-75 the preliminary data indicate that the gap between Ontario's per student contribution and the average of the other provinces had

grown to $47 million. As another point of comparison, the difference between British Columbia's per student contributions and that of Ontario has been of large proportions during each comparative year and in 1973-74 alone the funds needed by Ontario to match British Columbia's level of per student contributions was approximately $91 million. The financial estimates for 1975-76 show that the gap between Ontario and the national average has grown larger.

The results of this study do not substantiate recent statements that imply that Ontario universities have been funded on a per student basis more generously than universities in all other provinces.* The opposite is the case when looking at per student contributions, especially when one recognizes that Ontario universities educate a disproportionately large share of graduate students.

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* In a letter to the editor of the Hamilton Spectator, Wednesday, January 8, 1975, page six, Mr. Auld, Minister of Colleges and Universities stated that, "...the latest figures (1971-72) from Statistics Canada indicate that Ontario has the highest rate of per-student expenditures in Canada. The province's total contribution to universities' operating expenditures, including funds for assisted research, was $2,805.36 per student as compared to figures of $2,627.81 for Western Canada, $2,139.71 for Quebec and $1,999.12 for the Maritimes. Statistics Canada's figures for spending on higher education on a per capita basis and as a percentage of gross provincial expenditures also show Ontario's support to be greater than any other region of Canada.

Not only has Canada led the world in spending on higher education, but Ontario has led Canada".

Research Design

A time period was selected for this study based on the availability of consistent and reliable financial data from Statistics Canada and the Canadian Association of University Business Officers. Since this joint venture was only begun for the 1971-72 fiscal year, and the data were just completed for 1973-74, the period of time to be covered for the study was defined by this limit of usable data. These financial figures are basically comparable because the reporting format standardizes revenue and income, the same definitions being used by each reporting institution. This is especially important since revenue for capital purposes and ancillary enterprises has been separated from operating revenue. However, the CAUBO data had to be changed because some of the Ontario institutions were not included in 1971-72 and 1972-73. It does appear, however, that the 1973-74 reporting is accurate for all of the provinces.

Enrolment data came from the Statistics Canada publications that covered the same period of time. Although complete standardization of student statistics is virtually impossible because of the different definitions used by Canadian universities, these data are believed to be of sufficient quality to identify trends in levels of support by the provinces.

It was also decided that enrolment figures should be compared as to full-time/part-time enrolments and undergraduate/graduate enrolments for each of the provinces during the same period of time. Another analysis was done concerning provincial contributions to student financial aid programmes. Since tuition and fee income provides another source of revenue for universities, the impact of these sources of funds was also explored in the study.

Though there may be technical arguments about the standardization

used by Statistics Canada, the final results make it clear that there were substantial disparities between levels of support contributed by the different provinces.

Enrolment Data

Table 1 reports the number of full-time and part-time students both at undergraduate and graduate levels that were enrolled in each province during the three-year period (1971-73). This table also shows the percentage of students enrolled in each province in each category for the three different academic years. The tabulations show that Ontario had consistently educated at least 40% of the Canadian university students. Since Ontario's population accounts for approximately 35% of Canada's population, Ontario enrolls a relatively larger share of Canadian university students. These figures do not take into account the students who are enrolled in Grade 13 in Ontario, and of course the number of students in this programme adds to the commitment of the province to provide another level of educational opportunities and increases the relative education burden to the province.

Table 1 also demonstrates that the absolute number of full-time graduate students has remained relatively stable for both Ontario and Canada as a whole. There were only 82 more graduate students in Ontario in 1973-74 than in 1971-72. The larger increases in graduate student enrolments have occurred in the part-time category, but even so the Ontario growth in real numbers has just kept relative pace with the rest of Canada. Enrolment growth has been occurring in undergraduate student enrolments, for both Ontario and the rest of the country.

Table 2 shows the total full-time, part-time and full-time equivalent students for all of the provinces. After the conversion of part-time students into full-time equivalent students,

Table 1

Student Enrolments in Universities, by Province (1971-73)*

	Full-time Undergraduate Enrolments						Part-time Undergraduate Enrolments					
	1971		1972		1973		1971		1972		1973	
	#	%	#	%	#	%	#	%	#	%	#	%
Newfoundland	6,725	2.0	6,950	2.4	6,085	2.0	3,439	2.5	3,244	2.4	3,470	2.5
Prince Edward Island	1,771	0.6	1,581	0.5	1,419	0.5	1,197	0.8	919	0.7	1,047	0.7
Nova Scotia	15,321	5.3	14,934	5.2	14,939	5.1	2,990	2.2	3,172	2.4	3,700	2.6
New Brunswick	10,301	3.6	9,659	3.4	9,962	3.4	4,575	3.3	4,679	3.5	4,849	3.5
Quebec	54,547	19.0	56,682	19.9	58,967	20.0	55,416	40.3	46,215	34.7	47,132	33.6
Ontario	118,039	41.1	118,700	41.6	125,011	42.3	49,247	35.9	52,627	39.5	55,883	39.8
Manitoba	15,943	5.5	15,668	5.5	15,648	5.3	7,686	5.6	7,632	5.7	8,219	5.6
Saskatchewan	14,032	4.8	12,684	4.4	12,857	4.4	3,195	2.3	3,925	2.9	4,392	3.1
Alberta	25,587	8.9	24,477	8.6	25,835	8.7	6,115	4.4	6,536	4.9	6,260	4.5
British Columbia	25,028	8.7	23,823	8.4	24,865	8.4	3,498	2.5	4,342	3.3	5,447	3.9
Canada	287,294	100.0	285,158	100.0	295,558	100.0	137,358	100.0	133,291	100.0	140,399	100.0

	Full-time Graduate Enrolments						Part-time Graduate Enrolments					
	1971		1972		1973		1971		1972		1973	
	#	%	#	%	#	%	#	%	#	%	#	%
Newfoundland	352	1.0	359	1.0	333	0.9	269	1.5	234	1.1	349	1.5
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	970	2.7	1,162	3.2	1,157	3.1	352	2.0	390	1.9	466	2.0
New Brunswick	651	1.8	570	1.6	503	1.4	93	0.5	154	0.8	150	0.7
Quebec	8,272	23.2	8,746	24.1	9,147	24.8	5,901	32.7	6,997	34.2	7,918	34.6
Ontario	16,380	45.8	16,324	45.0	16,462	44.7	8,205	45.5	9,208	45.0	10,072	44.1
Manitoba	1,408	3.9	1,355	3.7	1,670	4.5	872	4.8	851	4.2	1,165	5.1
Saskatchewan	769	2.2	696	1.9	625	1.7	483	2.7	564	2.8	583	2.6
Alberta	3,182	8.9	3,287	9.1	3,178	8.6	1,433	7.9	1,638	8.0	1,626	7.1
British Columbia	3,748	10.5	3,760	10.4	3,749	10.2	421	2.3	425	2.1	528	2.3
Canada	35,732	100.0	36,259	100.0	36,824	100.0	18,029	100.0	20,481	100.0	22,857	100.0

* Education in Canada, Statistics Canada, 1974.

Table 2

Total University Enrolments and FTE Students

	Full-time Enrolments[1]			Part-time Enrolments[1]			FTE Student Enrolments[2]		
	1971	1972	1973	1971	1972	1973	1971	1972	1973
Newfoundland	7,077	7,309	6,418	3,708	3,478	3,819	8,136	8,303	7,509
Prince Edward Island	1,771	1,581	1,419	1,197	919	1,047	2,113	1,844	1,718
Nova Scotia	16,291	16,096	16,096	3,342	3,562	4,166	17,246	17,114	17,286
New Brunswick	10,952	10,229	10,465	4,668	4,833	4,999	12,286	11,610	11,893
Quebec	62,819	65,428	68,114	61,317	53,212	55,050	80,338	80,631	83,843
Ontario[3]	134,419	135,024	141,473	57,452	61,835	65,955	149,724	151,490	159,246
Manitoba	17,351	17,023	17,318	8,558	8,483	9,384	19,796	19,447	19,999
Saskatchewan	14,801	13,380	13,482	3,678	4,509	4,975	15,852	14,668	14,903
Alberta	28,769	27,764	29,013	7,548	8,174	7,886	30,926	30,099	31,266
British Columbia	28,776	27,583	28,614	3,919	4,767	5,975	29,896	28,945	30,321
Canada	323,026	321,417	332,412	155,387	153,772	163,256	366,312	364,151	378,040

1. Education in Canada, Statistics Canada, 1974.
2. Computed using Statistics Canada conversion ratio at 3.5 part-time students equals 1 FTE student.
3. Adjusted to exclude enrolments in Royal Military College, Ontario Bible College, Richmond College, and Dominican in FTE category only. Whether similar adjustments should be made to Statistics Canada figures for other provinces is impossible to ascertain.

Ontario's share of FTE students for 1973-74 is 42% of the national enrolment figures.

In both Table 1 and 2, the pattern of change for Ontario's university enrolment figures is consistent with that of the rest of Canada. Even though there has been an increase during the three-year period of 7,054 full-time students; 8,503 part-time students; and 9,483 full-time equivalent students, this growth has been comparable to the rest of the country, since Ontario's student enrolment percentage of Canadian university enrolments has remained stable.

Provincial Grants per FTE Student

The contributions of provincial funds to university operating revenue is reported in Table 3. The results show that as the largest and wealthiest province, Ontario contributes the greatest amount in total dollars to universities.

The results of Table 4 demonstrate how the relative position of Ontario universities in Canada has deteriorated during the years under investigation. In this three-year comparison, Ontario has fallen from third in the nation as far as per student contributions are concerned to sixth in the nation. At the beginning year of 1971-72, Ontario was above the national average by $55 per student, was again above the national average by $64 in 1972-73, and dropped to $45 per student below the national average in 1973-74. When Ontario's per student support is compared to British Columbia's for the same period, we find differences of $662, $555 and $573 per student respectively.

For purposes of illustration, it was decided to translate these per-student discrepancies into dollar ammounts that Ontario would

Table 3

Provincial Grants to University Operating Revenue[1]

	1971-72	Rank	1972-73	Rank	1973-74	Rank
Newfoundland	18,278	8	21,150	9	24,086	9
Prince Edward Island	3,488	10	3,638	10	3,757	10
Nova Scotia	38,255	7	37,643	6	41,362	7
New Brunswick	8,489	9	21,934	8	27,877	8
Quebec	196,629	2	206,561	2	236,021	2
Ontario[2]	396,623	1	415,327	1	447,290	1
Manitoba	48,677	5	44,452	5	54,099	5
Saskatchewan	39,991	6	37,189	7	42,512	6
Alberta	100,739	3	91,697	4	99,391	4
British Columbia	98,997	4	95,432	3	102,566	3
Canada	950,166		975,023		1,078,961	

1. Financial Statistics of Universities and Colleges, 1971-72, 1972-73 and 1973-74, prepared by Statistics Canada for CAUBO; plus funds in 1971-72 totaling $55.62 million; in 1972-73 totaling $43.3 million; and in 1973-74 totaling $2.75 million.

2. Specific funds for contractual agricultural research (OMAF) at the University of Guelph are included, and in 1971-72 some institutions in Ontario reported income to CAUBO using 10 month fiscal year while others used 12 month fiscal year. 1971-72 was the year that Ontario provincial government changed university fiscal year to end April 30 instead of June 30.

Table 4

Provincial Grants to Operating Revenue per FTE Student (1971-73)

	1971-72	Rank	1972-73	Rank	1973-74	Rank
Newfoundland	$2,246	7	$2,547	5	$3,208	2
Prince Edward Island	1,651	9	1,973	9	2,187	10
Nova Scotia	2,218	8	2,200	8	2,393	8
New Brunswick	691	10	1,889	10	2,344	9
Quebec	2,447	6	2,562	4	2,815	5
Ontario	2,649	3	2,742	3	2,809	6
Manitoba	2,459	5	2,286	7	2,705	7
Saskatchewan	2,523	4	2,535	6	2,853	4
Alberta	3,257	2	3,046	2	3,179	3
British Columbia	3,311	1	3,297	1	3,382	1
Canada	$2,594		$2,678		$2,854	

need to have added to its level of appropriations for universities in order to match the national average or British Columbia's level in 1973-74 and 1974-75 (see Table 5). The calculation used to generate the required funds required the computation of the average national contribution per student by excluding Ontario. Simply using the national average with Ontario in the analysis would have still resulted in Ontario being below the national average.

Table 5

Theoretical Fund Increases Needed for Ontario to Equalize per Student Contribution (in $ millions)

	National Average (Ontario included)	National Average (apart from Ontario)	British Columbia
1973-74	7.2	2.4	91.2
1974-75**	26.9	46.7	105.5

** using preliminary figures.

In order to check the validity of this per student comparison, contributions per student were also calculated by two alternative methods.*

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* Using actual FTE students reported by CAUBO, the dollar values per student were slightly lower because the FTEs were higher. This comparison showed that Ontario ranked sixth; was below the national average by $139 per student; and was below British Columbia by $586 per student. Also, a calculation was made using 1973 full-time enrolment figures only. This comparison for 1973-74 showed that Ontario ranked sixth in the nation; was below the national average by $86 per student; and was below British Columbia by $572.

Also, it should be noted that the preliminary data for 1974-75 points dramatically to the fact that Ontario's level of contribution has fallen even further behind than during the period of this study. These preliminary figures for 1974-75 are reported in Table 6. As reported in Table 5 we find that Ontario in 1974-75 would have had to contribute $46.7 million to match the average of the other provinces and $105.5 million to keep pace with British Columbia's per student contribution. Also, its rank position fell from sixth to seventh in Canada.

Table 6

Provincial Contributions per Student Using 1974-75 Preliminary Data*

	Provincial Contributions in $000	FTE Enrolments	Contribution per Student	Rank
Newfoundland	$ 28,679	7,011	$4,090	1
Prince Edward Island	4,450	1,637	2,718	10
Nova Scotia	54,500	18,867	2,889	9
New Brunswick	36,300	11,740	3,092	6
Quebec	295,580	89,557	3,300	4
Ontario	512,600	169,372	3,026	7
Manitoba	64,648	20,271	3,189	5
Saskatchewan	45,500	15,421	2,951	8
Alberta	109,400	32,459	3,370	3
British Columbia	119,140	32,622	3,652	2
Canada	$1,270,797	398,957	$3,185	

* Source: Statistics Canada, estimated data.

Projections for 1975-76 show that the position of Ontario universities will slip even further behind with a rank order of nine and behind the average of the other provinces by $450 per student. The 1974-75 figures reported a difference of $276. With Ontario included in the national average the respective differences are $260 per student in 1975-76 and $159 per student in 1974-75.

Tuition and Fee Incomes

Table 7 reports tuition and fee income by province, percentage of operating revenue that these figures represent, rank order position and compares the rank to the previously reported ranks for operating grants per student (see Table 4). It is evident that there is an inverse relationship between the level of tuition and fees and provincial contributions per student, i.e. provinces which contribute

Table 7

Tuition and Fee Income as a Percentage of Canadian Universities Operating Income for 1973-74

	Tuition & Fee Income in $000	Percent of Operating Revenue	Rank	Per Student Contribution Rank
Newfoundland	$ 4,483	13.7	6	2
Prince Edward Island	1,111	20.1	1	10
Nova Scotia	9,821	15.3	3	8
New Brunswick	6,381	15.3	3	9
Quebec	48,327	13.3	7	5
Ontario	107,881	15.2	5	6
Manitoba	9,581	11.7	8	7
Saskatchewan	7,915	15.6	2	4
Alberta	16,357	11.1	9	3
British Columbia	15,947	10.3	10	1
Canada	$227,804	13.7	-	-

Source: CAUBO, 1973-74

higher operating support on a per student basis charge lower tuition and fees. Although Ontario's contributions per student are lower than the average for Canada, tuition and fees paid by students are above the national average.

Because of this, it was decided to investigate the amount of operating revenue that was generated for universities from tuition and fee income. Table 7 showed that the range of the percentage of tuition and fees of operating revenue was from 10.3% to 20.1%. From the earlier comparison of operating grants needed to match British Columbia and the national average (see Table 5), we find that the higher percentage of operating revenue generated by tuition and fees translates into the following dollar amounts:

1)	Increased income for Ontario as compared to national average (Ontario included)	$10.6 million
2)	Increased income for Ontario universities as compared to the national average (apart from Ontario)	$17.7 million
3)	Increased income for Ontario universities as compared to British Columbia	$35.0 million

These findings then eliminate the differences reported in Table 5 between Ontario and the national average. British Columbia's level of contribution would require $56.2 million vs. $91.2 million. This analysis then shows that the higher amounts of income generated by tuition and fees do affect the gaps reported for 1973-74 and eliminate the difference between Ontario and the national average even though there still is a large difference between Ontario and British Columbia.

However, since Ontario has decided not to increase tuition and fees

for 1974-75 and 1975-76, tuition and fees as a percentage of operating revenue will grow smaller for Ontario. Remembering the findings that Ontario was below the national average of per student contributions by only $45 per student in 1973-74 (Table 4); is expected to be below by $159 in 1974-75 (Table 6); and below the projected value of the national average by $260 per student in 1975-76; the tuition and fee income will not compensate for the expected differences between Ontario and the national average in 1974-75 or 1975-76.

Student Financial Assistance Programmes

Since provincial contributions to student financial assistance programmes represent another kind of financial contribution to university education, it was decided to see if any conclusions could be drawn from the available data. Unfortunately, the formatting of the reports issed by Statistics Canada make it impossible to compare these contributions from an inter-provincial perspective. Funding has either been reported as total awards to post-secondary education without differentiating between universities and community colleges, or the report has combined federal and provincial contributions together.

There was nevertheless an observable trend present in these data which seemed to warrant further investigation. It appeared as if Ontario's programme in total dollar amounts represented about 40% of the funds spent on such programmes throughout the nation. Since that percentage was the same as Ontario's share of university students in Canada, it was decided to investigate the possibility of there being a correlation between student enrolment and total dollars contributed by Ontario to student financial aid. The

results of this comparison are reported in Table 8.

Table 8

Financial Assistance Grants per FTE Students in Ontario

	Amount in* $000	FTE Students	Grants per FTE
1971-72	60,152	150,834	$400
1972-73	64,472	152,691	422**
1973-74	67,389	160,317	420

* Funds were reported in the Ministry of Colleges and Universities Statistical Summary for the respective years

** Tuition was increased $100 per student this year.

Table 8 indicates that there is a correlation between student enrolment and the total dollars allocated by Ontario for student assistance. This result justifies the conclusion that even though Ontario has the largest financial aid programme, it has not grown disproportionately in relation to enrolment growth. A forthcoming report from Statistics Canada on financial assistance programmes in Canada may shed more light on this topic.

Concluding Remarks

Table 9 reports the number of FTE students in both the undergraduate and graduate programmes. As mentioned earlier, the number of graduate students has grown at a much slower pace than undergraduates, but the relative burden of graduate education is higher for Ontario than its burden of undergraduate education.

Ontario's universities have provided educational experience for the citizens of Ontario, despite the more demanding mix of students, at a lower level of government funding per student than the national average and at a much lower level of government funding per student than some other provincial university systems.

Table 9

FTE Undergraduate and Graduate Enrolments for 1973-74

	FTE Undergraduates	%	FTE Graduates	%
Newfoundland	7,076	2.1	433	0.9
Prince Edward Island	1,718	0.5	-	-
Nova Scotia	15,996	4.7	1,290	2.9
New Brunswick	11,347	3.3	546	1.2
Quebec	72,433	21.5	11,409	26.3
Ontario	140,978	41.9	19,340	44.6
Manitoba	17,996	5.3	2,003	4.6
Saskatchewan	14,112	4.2	792	1.8
Alberta	27,624	8.2	3,643	8.4
British Columbia	26,421	7.8	3,900	8.9
Canada	335,701	100.0	43,356	100.0

AJG:tk
February 27, 1976.